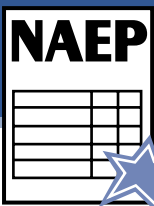


MEASURE UP

Assessment News for Middle and High School Teachers

The
Nation's
Report
Card



NAEP: The Nation's Report Card

The National Assessment of Educational Progress (NAEP) is the only nationally representative and continuing assessment of what America's elementary and secondary students know and can do in various subject areas. NAEP allows one to compare the performance of students in one state with that of another state or with the entire nation. Because of this, NAEP is often called the "Nation's Report Card" and is an important tool for educators, parents, policymakers, researchers, and others working to provide quality education for all students.

The National Center for Education Statistics (NCES), an office of the U.S. Department of Education, is responsible for NAEP. Since 1969, assessments have been conducted periodically for 4th, 8th, and 12th grade students in reading, mathematics, science, writing, U.S. history, civics, geography, and the arts. Though results are widely reported by national and local media, NAEP guarantees that all data related to individual students and their families remain confidential.

NAEP enjoys a strong reputation among educators as a fair and accurate measure of students' progress. NAEP is overseen by the National Assessment Governing Board (NAGB) whose members are appointed by the Secretary of Education but do not report to the Department of Education. NAGB sets policy for NAEP and is responsible for developing the framework and assessment specifications that serve as the blueprint for the assessments. NAGB is a bipartisan group whose members include governors, state legislators, local and state school officials,

See Report Card on page 7

Positively Powerful

Creating a Positive Attitude About Assessment in Your Classroom

Attitudes about testing are important. Students perform better on standardized tests if they have a positive attitude. Teachers, students, and parents can work together to create that positive testing environment where students will do their best.

"Positively powerful" describes your influence as the classroom teacher over how students react to standardized testing. This influence is exhibited in three ways:

- students' perception of your attitude toward the tests;
- the testing situation and how well it is managed;
- and students' confidence that they will do well on the tests.

See Attitude on page 11

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Student Success Begins with You

There are many ways in which teachers help students perform at their optimal levels on formal and informal assessments and thus obtain scores that will more accurately reflect their achievement.

- Be knowledgeable. Know your school or district's learning standards. Possess an in-depth knowledge of the content you teach, and use proven instructional strategies.
- Plan and execute quality-learning activities that enhance student competence on the content and skills to be tested.
- Tell students what they need to do to succeed. Do not let your students struggle to figure out what is expected of them.
- Use well written classroom assessment tools and observation for determining student progress throughout the year toward meeting the standards.
- Know your students. The better you know your students, the easier it is to understand their difficulties, needs, and motivators.

See Student Success on page 2



Discover the NAEP Questions Tool

Assessment Items You Can Bank On

by Dr. Jeff Barker

After every assessment cycle, NAEP releases about 25-percent of the assessment items to the public through the NAEP Questions Tool. It provides easy access to items and their scoring guides, answer keys, and performance data. Both state and national data are presented where appropriate, including state-specific group information and actual student responses.

While many states have developed online assessment item banks to enhance instruction and to prepare students for various assessments, teachers agree that a state item bank may have limited capabilities.

The NAEP Questions Tool, however, allows teachers, parents, and students to search for items in a variety of ways and contains over 1,000 questions from several content areas including Math, Reading, Writing, Civics, U.S. History, Geography, Science, and the Arts.

Teachers who have discovered the NAEP Questions Tool find it to be a very valuable resource because of the scope of questions it provides and its navigation capabilities.

Here is a sample of what the NAEP Questions Tool offers.

- The NAEP Questions Tool provides items based upon what students across the nation should know and be able to do in grades 4, 8 and 12, but the items in the NAEP item bank are appropriate for other grade levels as well.
- The NAEP Questions Tool will sort items by domains, objectives, cognitive ability, and difficulty levels.
- The NAEP Questions Tool includes various types of items such as multiple-choice, short-constructed, and extended-constructed response.

See Questions Tool on page 8

From the Editor's Desk

Dr. Marilyn Whirry



National Teacher of the Year, 2000

You and I belong to the magnificent profession of education. All of us are helping students become fine scholars and fine human beings.

We are all aware that the quality of a teacher has a significant impact on student achievement. We have always known that the individual teacher is important, but perhaps we did not have the research we have today to prove it. Research shows that teacher effectiveness, in relation to student achievement, is more significant than the combined effects of class size, homogeneous or heterogeneous grouping, urban or rural settings, and providing school lunches. Knowing this, we recognize where our energy should be placed. We must help all teachers be great for the betterment of all students.

Knowledge is one of the stepping-stones to greatness. An understanding of subject matter, the use of excellent pedagogical strategies, and good assessment lead to greatness in an individual teacher.

Teachers must know about and believe in the value of assessment. Any questions you have must be answered fully and completely. That is what this newspaper has as its goal. We want to answer your questions and concerns about assessment in general, and about the National Assessment of Educational Progress (NAEP) specifically.

Great teachers beget great students.
Great students understand the
importance of assessment.

We will inform you on all types of assessment, the uses of classroom assessments; the uses of assessment data; the benefits of challenging assessment; the role of the teacher in assessment; how to interpret and use NAEP results; and what to expect if your school is selected to participate in NAEP.

Your attitude toward learning and assessment is very important in any test-taking activity of a student. Therefore, we want you to understand the positive and powerful aspects of assessment. Great teachers beget great students. Great students understand the importance of assessment.

We hope you will enjoy reading and learning from the news and information concerning assessment that we present to you. We want you to be more knowledgeable and to develop a depth of understanding, inquisitiveness, and passion about new ideas. We want you to feel the excitement that comes with a new challenge and to feel a renewed enthusiasm for the role of assessment in what you do and what you teach.

All of us must continue to be committed human beings who cannot tolerate mediocrity in others or ourselves because we are all trying to be great teachers and great people. We want you to be motivated to be a dynamic educator who makes a difference in student learning. If our newspaper helps you in any of the ways we have mentioned, or in ways still unknown, we will be grateful.

Dr. Marilyn Whirry has taught for the last forty years at the high school and university levels and has presented at over 450 workshops to teachers all over the United States and Japan. She served on the National Assessment Governing Board for eleven years and currently serves as a NAEP consultant. During Dr. Whirry's professional career, she received many awards and adulations, including being named National Teacher of the Year 2000.

Tips: Test Prep

By the time students leave the primary grades, many have formed lasting opinions about their academic abilities, particularly regarding test taking. Those who have done well in the primary grades tend to trust what they know, but students who have performed poorly tend to expect to fail before they even begin.

The good news is that test-taking skills can be taught and students can learn to demonstrate what they know.

Below are some specific student exercises that can be integrated into classroom activities to help develop test-taking skills.

- Have students classify questions by identifying the different thinking skills required, such as recall, analysis, comparison, inference, and evaluation.
- Encourage students to look at verbs and the placement of verbs in the question to determine what type of response is expected.
- Administer timed tests by placing time limits on classroom assignments, quizzes, essays, or sections of a test.
- Vary classroom test formats such as separating the questions from the answer page, providing a bubble chart for answers, etc. This type of practice is especially useful with tests involving many questions.
- Develop tests where incorrect answers count against the total of correct responses.
- Develop practice quizzes that are taken online if your state uses online assessment.
- Have your entire class share how they selected their test taking strategies. This can be very enlightening to the teacher as well as the student.

Student Success

continued from page 1

- Hold high but realistic expectations for your students. Your expectations have a powerful effect on student performance. If you act as though you expect your students to be motivated, hardworking, and interested, they are more likely to be so.
- Help students set achievable goals for themselves. Encourage students to focus on their continued improvement, not just on their grade on one test or assignment.
- Give frequent, early, positive feedback that supports students' beliefs that they can do well. Praise and encourage students for high achievement and offer extra help whenever needed.
- Teach students to value hard work, learning, and challenges.
- Teach students how to cope with disappointing performance by planning for new strategies and more effort; and provide them with the study skills that will put them more in charge of their own learning.

Your role as instructor, motivator, and cheerleader is the key to unlocking the door to student success. When students possess a bank of test-taking strategies, understand what is expected of them during a test-taking situation, and possess the confidence needed to succeed, they will perform well on any type of assessment. ■



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MEASURE UP

Assessment News for Middle and High School Teachers



Fall 2004 VOL.1, NO. 1

Measure Up — The newspaper's goal is to familiarize teachers with NAEP and to inform teachers about assessment topics.

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Designing Quality Classroom Assessments

By Dottie Heusman

We, as teachers, work directly with children each day of the school year. Our judgments concerning student performance must be accurate and thorough. The use of high quality classroom assessments helps us measure student achievement and progress.

The most critical work of the teacher in the assessment process is to make certain that each student has an opportunity to learn the subject area concepts fully and completely. Excellent teaching, guided practice time, and personal help for each student prior to testing contribute to how well students perform on assessments. To measure performance, it is essential teachers use a variety of quality assessments to check student knowledge of the content taught.

Teachers often need to develop their own classroom assessments. Some initial work as you begin to develop a classroom assessment tool can help you design an assessment that is fair, challenging, of high quality, and a learning experience for every student, who participates in the assessment.

Designing a quality assessment includes four basic steps:

1. Clearly define the purpose of instruction and assessment through alignment with learning objectives.
2. Choose assessment methods that align with the learning objectives and what you have been teaching. Assessment methods should allow students to demonstrate the knowledge and skills described in the learning objectives and practiced during instruction. Choose carefully from among selected response assessment, open-ended assessment, and performance assessment.
3. Choose assessment items and exercises that are highly representative of the knowledge and skills described in the learning objectives and what you've been teaching.
4. Make certain that your assessment items, exercises, and directions are clear and understandable so your students know what you are asking of them. If your students have to decipher unclear wording, make guesses about what is expected of them, or decode "trick" assessment items, then you are not assessing their knowledge and skills in relation to learning objectives. You are assessing their knowledge and skills in deciphering, guessing, and decoding.

1 Clearly define the purpose of instruction and assessment through alignment with learning objectives.

2 Choose assessment methods that align with the learning objectives and what you have been teaching.

3 Choose assessment items and exercises that are highly representative of the knowledge and skills described in the learning objectives and what you've been teaching.

4 Make certain that your assessment items, exercises, and directions are clear and understandable so your students know what you are asking of them.

In addition to the quality of the assessment itself, individual student factors can influence the accuracy of conclusions made from assessment results. Individual factors include student special education needs and student attitudes. Special education needs are typically met through testing accommodations such as allowing students more time to complete an assessment, reading aloud some portions of paper and pencil tests, etc. The goal is to minimize the influence a student's special needs has on his or her ability to demonstrate knowledge and skills.

Student attitudes influence the accuracy of inferences made from assessment results. If a student is not motivated to perform well on an assessment, suffers from extreme test anxiety, or just does not feel well, assessment results will not accurately reflect the student's knowledge and skills. Therefore, it is important to offer multiple opportunities for students to demonstrate their knowledge and skills, instead of basing student evaluation on one or a few assessments.

Environmental factors may also influence students' abilities to demonstrate their knowledge and skills on an assessment. I was once taking an exam and there was someone mowing the lawn right outside the open classroom windows. This constant noise was a distraction that made it hard for me to concentrate on the assessment items. Sounds, temperature, and even smells can pose distractions to students trying to concentrate on an assessment task. These are probably the easiest influences to control as a teacher, but are often the most overlooked.

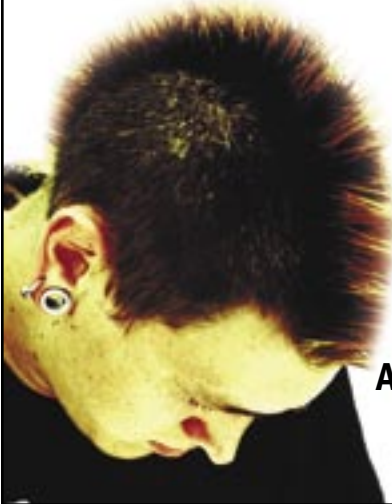
The judgment of the teacher is extremely important in classroom assessment. Defining assessment purpose, choosing assessment methods, creating quality items, meeting special needs, and monitoring environmental factors help to develop an assessment that is fair, thorough, and challenging for all students involved.

Dottie Heusman is the NAEP State Coordinator at the Nebraska Department of Education. She is a graduate of the University of Nebraska-Lincoln and holds degrees in Elementary Education and Educational Administration.

Dottie served as an elementary teacher and K-12 Assessment Coordinator before accepting her current position supporting the professional development of teachers and their assessment expertise across the state of Nebraska. ■



In 2003, youth (ages 16-24) not in school or working:



White: 10%
Black: 20%
Hispanic: 18%
American Indian: 28%
Asian/Pacific Islander: 9%

Source: National Center for Education Statistics (NCES)

The percentage of eighth-grade students who studied maps and globes at least once or twice a week increased between 1994 and 2001 from about 39 percent to approximately 45 percent.



From Classroom to National Assessments

What the Results Tell Us

A variety of assessments can and should be used by teachers, parents, students, and policy makers to improve education. Quality assessments can help teachers focus classroom instruction, parents identify their child’s strengths and weaknesses, students monitor their progress, and policymakers evaluate programs. From unit assessments to national tests, the results benefit everyone.

Teacher directed or classroom assessment is necessary to determine the individual progress of students, the quality of curriculum, and the effectiveness of teaching strategies. The challenging classroom contains a plethora of assessment strategies which guarantee that students be evaluated in many ways. The teacher observes students at work, and, using rubrics, evaluates group collaboration, judges presentations,

measures responses to discussion questions, assesses writing, and examines a number of types of testing.

District assessment has an important place in the assessment cycle, also. Its most important function is to evaluate programs and identify areas of curriculum or testing that need improvement. Another important result is the individual scores for students as well as for specific schools. In one school district, students are given an essay test in September. Teachers score these tests and conversations ensue as to the areas of writing that need the most improvement. Another writing assessment is given in early May to determine if the goals for the year have been attained and if the students improved in their skills and ability. This kind of assessment and the conversations and analyses that follow cannot be achieved in any other way.

The next type of assessment comes directly from each state. This assessment is given to all children in grades three through eight in the areas of reading and mathematics. This assessment provides student, school, and district results.

On the national level, we have the National Assessment of Educational Progress or NAEP. NAEP provides state and national performance data for many subjects using established achievement levels. It is given throughout the country to a sample of students from each state, which allows NAEP to compare performance between states and to track national scores over a period of time. It, in its various forms, measures what students know and are able to do. ■

	Teacher Directed Assessments	District Directed Assessments	State Directed Assessments	NAEP
What can the results do?	<ul style="list-style-type: none">▪ Provide student and class performance data gauged against teacher expectations▪ Allow for comparisons over time	<ul style="list-style-type: none">▪ Provide student, school, and district performance data for certain subjects gauged against standards or norms selected for appropriateness to the district▪ Allow for comparisons over time	<ul style="list-style-type: none">▪ Provide student, school, district, and state performance data for certain subjects gauged against standards or norms selected for appropriateness to the state▪ Allow for comparisons over time	<ul style="list-style-type: none">▪ Provide state and national performance data for certain subjects gauged against established performance levels▪ Allow for comparisons over time
What is the level of reporting?	<ul style="list-style-type: none">▪ Individual student	<ul style="list-style-type: none">▪ Student, class, grade, school, and district	<ul style="list-style-type: none">▪ Student, class, grade, school, district, and state	<ul style="list-style-type: none">▪ Grade, certain very large districts, state, and national
Who are the audiences for the results?	<ul style="list-style-type: none">▪ Teachers, students, and parents	<ul style="list-style-type: none">▪ Teachers, students, parents, building administrators, district/state administrators and policy makers, and the general public	<ul style="list-style-type: none">▪ Teachers, students, parents, building administrators, district/state administrators and policy makers, and the general public	<ul style="list-style-type: none">▪ The general public, local/district/state administrators, policy makers, education professionals and researchers, Congress
What can students and parents do with the results?	<ul style="list-style-type: none">▪ Determine individual progress to build on strengths and address weaknesses▪ Allow for comparisons over time	<ul style="list-style-type: none">▪ Compare student, school, and district performance	<ul style="list-style-type: none">▪ Compare student, school, district, and state performance	<ul style="list-style-type: none">▪ Compare state performance to achievement levels and performance of other states▪ Compare state performance over time▪ Identify increases/decreases in achievement gaps
What can teachers and building personnel do with the results?	<ul style="list-style-type: none">▪ Determine content mastery for students and classes▪ Evaluate effectiveness of curriculum and teaching strategies	<ul style="list-style-type: none">▪ Evaluate program effectiveness▪ Identify areas of curricular strength and weakness▪ Identify resource and staff development needs▪ Track progress of certain student groups and schools	<ul style="list-style-type: none">▪ Evaluate program effectiveness▪ Identify areas of curricular strength and weakness▪ Identify resource and staff development needs▪ Track progress of certain student groups, schools, and districts	<ul style="list-style-type: none">▪ Compare state performance to achievement levels and performance of other states▪ Track the progress of certain reporting groups that might provide a comparison for progress of similar groups in their building on district and state assessments▪ Compare state performance over time▪ Identify increases/decreases in achievement gaps between subgroups of students
What can administrators and policymakers do with the results?		<ul style="list-style-type: none">▪ Evaluate program effectiveness▪ Determine the need for new programs▪ Identify areas of curricular strength and weakness▪ Identify resource and staff development needs	<ul style="list-style-type: none">▪ Evaluate program effectiveness▪ Determine the need for new programs▪ Identify areas of curricular strength and weakness▪ Identify resource and staff development needs	<ul style="list-style-type: none">▪ Compare state performance to achievement levels and performance of other states▪ Track the progress of certain reporting groups that might provide a comparison for progress of similar on district and state assessments▪ Compare state and national performance over time▪ Identify increases/decreases in achievement gaps between subgroups of students

Watch for the Winter Edition
of **MEASURE UP**,
Coming to your School in
December 2004.

Featuring:

- PTA: Let's Talk about Assessment
- What do Your Students Think about Assessments?
- Assessment for Learning: Why Students Need the Complete Assessment Picture
- The Real Deal: A Teacher Uses NAEP Frameworks to Improve Student Achievement



Assessments to Meet Every Need

There are many ways to assess student learning both formally and informally. Informal assessment is something that occurs constantly in the classroom in a conscious manner. Through observations and oral questioning teachers evaluate group work, discussions, presentations, and other types of student activity. Formal assessment is more often planned and systematic.

Selected response assessment, which includes multiple choice, true/false, fill-in-the-blank, and matching items, is what most people think about when they examine testing. Items in this type of assessment are typically scored as right or wrong. Selected response assessment has been associated with simple recall of facts and rote memorization. Although selected response assessment is well suited to assessing knowledge and understanding, it can also be used to assess reasoning skills and student information retrieval skills, which are critical in the Information Age.

Open-ended response (constructed response) assessment includes short answers or open-ended questions. This type of assessment asks students to delve more deeply into ideas and can be used to assess knowledge, understanding, communication, and reasoning skills. Scoring criteria (e.g., rubrics, checklists) must be developed and used consistently for all student responses. Although it requires some work, developing scoring criteria makes scoring much easier and far less subjective. Most teachers equate open-ended response assessment with written responses. However, open-ended assessment can be conducted interview style as well. This alternative is more time-consuming, but it can promote teacher-student relationships and allow students challenged by writing to demonstrate their abilities in other ways.

Performance assessment includes essay responses, skill performance exercises, and product development. It can be used to assess knowledge and understanding, reasoning skills, and skill application. It is more intensive than other assessment methods and gives insight into students' knowledge and ability. It is also well suited to assessment of student growth. Portfolio assessment is often used for this purpose. Similar to open-ended response assessment, rubrics must be developed before the performance exercise development occurs and should be used consistently.

A Final Note: Mix it Up

Although these are three basic types of assessment methods, they are not mutually exclusive. In a challenging and exciting classroom, all of these should be used. Indeed, any assessment a teacher gives can include two or three types of test questions. In this way, students of all levels of ability can show what they know and are able to do. ■

2001 NAEP Geography Results for Grade 12

Achievement at or above basic level for public & non-public schools combined:

Asian/Pacific Islander 72%

White 31%

American Indian 74%

Hispanic 52%

Black 35%

Average percentage of eighth-grade mathematics lesson time devoted to review in 1999:

Czech Republic: 58%

Hong Kong: 24%

Japan: 24%

United States: 53%

Source: Trends in International Mathematics and Science Study (TIMSS)



20% of grade 12 students surveyed by NAEP in 2002 say they never or hardly ever talk about school studies with someone in their family.

Facts About NAEP

- NAEP has been conducted regularly since 1969.
- NAEP is the only nationally representative continuing assessment of what American students know and can do in various subject areas.
- National NAEP reports statistical information about student performance and factors related to educational performance for the nation and specific subgroups of the population. It includes students drawn from both public and nonpublic schools and reports results for student achievement at grades 4, 8, and 12.
- State NAEP is identical to National NAEP. However, it is administered at grades 4 and 8, but not at grade 12. States can monitor their own progress over time in the selected subject areas. They can then compare the knowledge and skills of their students with students in other states and with the nation.
- NAEP does not report on the performance of individual students. Instead, the assessments are administered to representative samples of students in public and nonpublic schools.
- NAEP collects information from participating students, teachers, and principals about hundreds of contextual background variables regarding instructional practices, curricula, and student, teacher, and school characteristics.
- In the last 10 years, NAEP has expanded its use of performance tasks. Performance assessment requires students to prove their understandings and abilities by performing a task.
- NAEP assesses three types of writing: narrative, informational, and persuasive.
- In the reading assessment, NAEP assesses literary texts that include fiction, poetry, non-fiction, and informational texts that include exposition, persuasion, and document materials.
- NAEP assesses five broad strands of mathematics: number sense, properties, and operations; measurement; geometry and spatial sense; data analysis, statistics, and probability; and algebra and functions. ■

When NAEP Comes to Town

What to Expect When NAEP Arrives at Your School

If your school participates in the NAEP assessment, you can expect NAEP staff to do everything they can to accommodate you and your students. NAEP knows that demands placed on teachers are great. As a result, it has designed its assessment process to be as simple as possible.

Your school will select a school coordinator, usually a faculty member, to coordinate assessment arrangements with NAEP staff. Your coordinator will take care of most assessment arrangements in the month of November. The assessment itself will take place sometime between late January and early March. Your school coordinator will notify you of the date, time, and place your students will take the assessment. In some cases, not all students in a grade will be assessed. The decision whether or not to assess all grade eligible students will depend on the number of students enrolled in the grade.

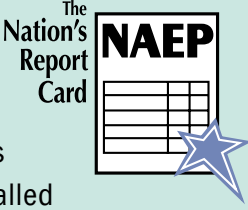
Parents of all students selected for the assessment must be notified about the test. Your school will distribute the notification. Parents are asked to notify the school if they do not want their child to participate in the assessment.

Teachers, parents, and students may want to view sample test items to see how NAEP measures student achievement. Sample items can be used for students to practice. Upon request, NAEP staff will provide you or parents of your students with sample NAEP test items, called Demonstration Booklets. (If you or parents of your students would like to see these materials, contact your school coordinator. Assessment items are also available online. Visit <http://nces.ed.gov/nationsreportcard/> and click NAEP Questions.)

On the day of the assessment, NAEP staff will come to your school to administer the assessment. The staff consists of a team of Assessment Administrators and an Assessment Coordinator. The Assessment Administrator, or AA, is responsible for administering the assessment. The Assessment Coordinator, or AC, is responsible for coordinating assessment sessions and making arrangements with the school. ACs will work closely with your school's appointed school coordinator and the NAEP staff to successfully administer assessment sessions.

Each assessment session consists of two 25-minute blocks. Most students will participate in both assessment blocks. This means the entire session will last no longer than one hour. There are a few exceptions, however. The hands-on Science assessment takes 90 minutes and more time is allowed for some students that require accommodations. Although NAEP staff is responsible for the administration of the assessment, you are encouraged to stay in the room with your students.

The National Assessment of Educational Progress is known as NAEP and is often called "The Nation's Report Card".



If some parents have opted their child out of the assessment or if some students have not been selected for the sample, you will need to plan for these students. You can facilitate a smooth transition from your regular classroom routine to the assessment session by reminding students in the days leading up to assessment day of what they can expect. It may help to introduce the AA to students and explain his or her role during the assessment session.

Depending on the number of students in the sample, the assessment session may take place in your classroom. If your school has more than 120 students taking the assessment, it will take place in one large room, usually in the school's cafeteria. Regardless of where the assessment occurs, you can expect NAEP staff to leave the room exactly as they found it.

In order to get an accurate picture of what all students know and can do, NAEP wants to include as many students with disabilities (SD) and limited English proficiency (LEP) as possible in the assessment. NAEP staff will discuss the feasibility of providing accommodations for these students with your school coordinator.

In the weeks leading up to the assessment, the school coordinator may ask you to complete a teacher questionnaire. The NAEP assessment is the only assessment in the nation that provides data on background variables such as teaching skills, instructional practices, and educational backgrounds. NAEP knows your participation in these activities is integral to collecting accurate data and has designed these questionnaires to be completed on the Internet or in hard copy. You may choose the method that works best for you.

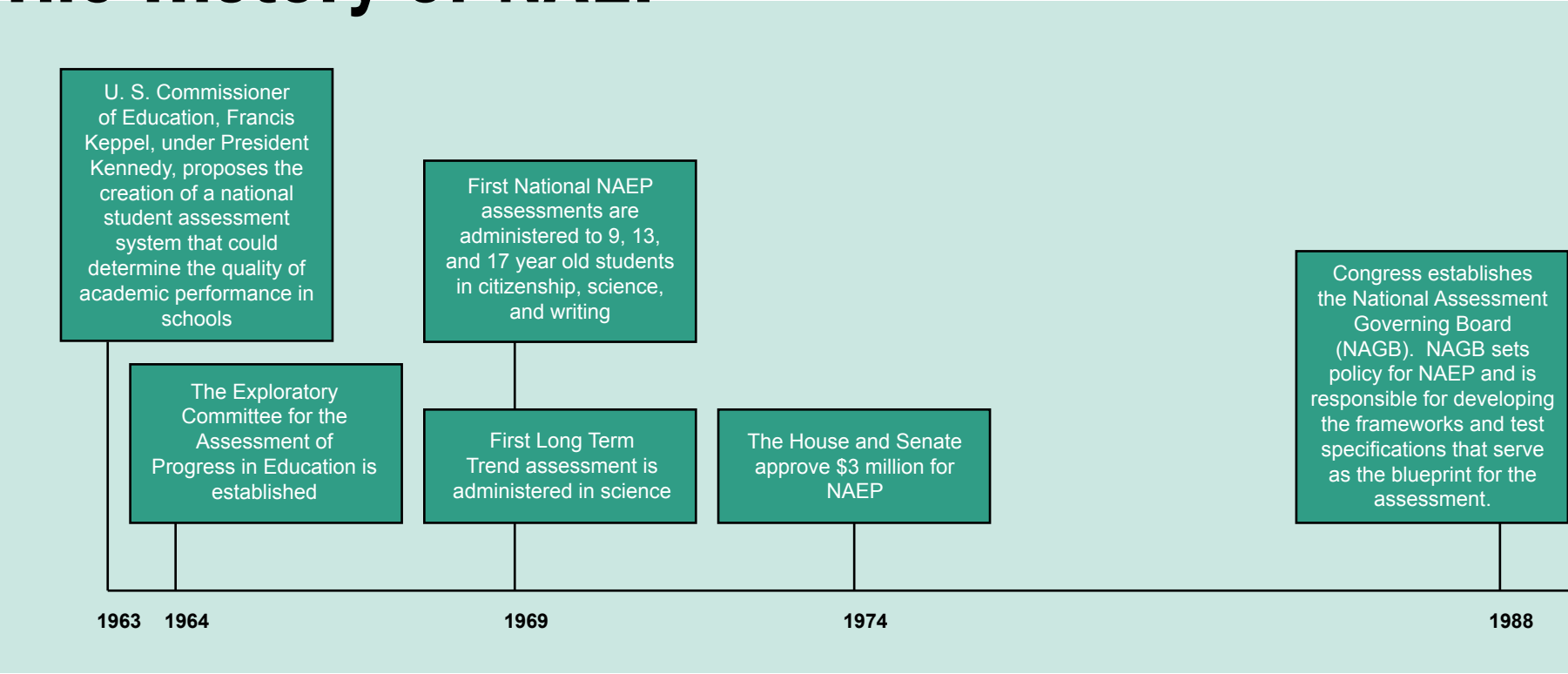
If you are a teacher of a student with disabilities (SD) or limited English proficiency (LEP) who has been selected to be assessed, your school coordinator will ask you to fill out an SD or LEP questionnaire. You will have the option of completing this questionnaire on the Internet as well.

Finally, after NAEP has been administered in your school, look for the public release of NAEP data by the U.S. Department of Education. You have played an important part in generating data that will be used to improve the quality of education across the country. These reports, called the Nation's Report Card, can be found at: <http://nces.ed.gov/nationsreportcard/> and will be released about 12 months following an assessment. Shorter reports are often released about 6 months after the assessment.

On the day of the assessment, NAEP staff will come to your school to administer the assessment.

Much can be learned from analyzing and relating the NAEP data to your own program. Take time to review these data and share them with your colleagues. The progress of education in this country is due to teachers—teachers like you, who are dedicated and committed to improving the quality of education for their students. ■

The History of NAEP



The Chronology of NAEP

Year	National	State	Long-Term Trend
1969–70	citizenship, science, writing	State assessments began in 1990	science
1970–71	literature, reading		reading
1971–72	music, social studies		
1972–73	mathematics, science		mathematics, science
1973–74	career/occupational development, writing		
1974–75	art, index of basic skills, reading		reading
1975–76	citizenship/social studies, mathematics		citizenship/social studies
1976–77	basic life skills, science		science
1977–78	consumer skills, mathematics		citizenship/social studies
1978–79	art, music, writing		
1979–80	reading, literature, art		reading
1981–82	mathematics, science, citizenship, social studies		mathematics, science
1984	reading, writing		reading, writing
1986	computer competence, U.S. history, literature, mathematics, science, reading		mathematics, science, reading
1988	civics, document literacy, geography, U.S. history, reading, writing		civics, mathematics, science, reading, writing
1990	mathematics, science, reading	mathematics (8)	mathematics, science, reading, writing
1992	mathematics, reading, writing	mathematics (4, 8), science (8)	mathematics, science, reading, writing
1994	geography, U.S. history, reading	reading (4)	mathematics, science, reading, writing
1996	mathematics, science	mathematics (4, 8), science (8)	reading, writing, mathematics, science
1997	arts (8)		
1998	reading, writing, civics	reading (4, 8), writing (8)	
1999			reading, mathematics, science
2000	mathematics, science, reading (4)	mathematics (4, 8), science (4, 8)	
2001	U.S. history, geography		
2002	reading, writing	reading (4, 8), writing (4, 8)	
2003	reading (4, 8), mathematics (4, 8)	reading (4, 8), mathematics (4, 8)	
2004			reading, mathematics
2005	reading, mathematics, science	reading (4, 8), mathematics (4, 8), science (4, 8)	

Report Card

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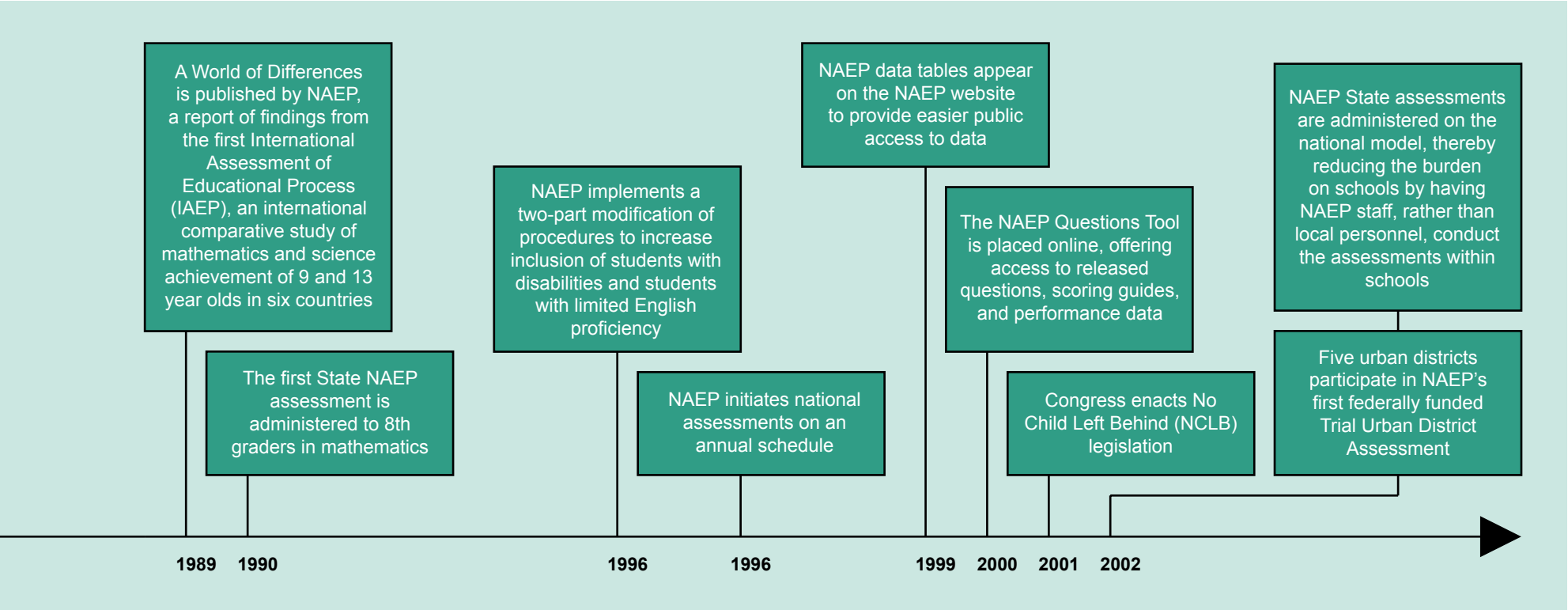
educators, business representatives, and members of the general public.

NAEP assessments are given to representative samples of students nationally and within participating states. State NAEP assessments allow states to compare themselves with the nation and with other states. State NAEP was introduced in part because state assessments differ across states, making comparisons difficult.

NAEP is a criterion-referenced assessment. This means it is designed to show

how well students perform according to specified criteria. Performance is reported using three categories: basic, proficient, and advanced.

NAEP collects information regarding student, teacher, and school characteristics; instructional practices; and curricula. Nonparticipation and nonresponse—by students as well as teachers—greatly reduce the amount of potentially useful information that can be reported. ■



Questions Tool

continued from page 1

- Many types of assessments can be created from the NAEP Questions Tool. Teachers are not required to build their assessments by cutting and pasting questions.
- The NAEP Questions Tool indicates how students performed on an item and provides examples of student responses. State performance results on items are also available. Item performance data has proven to be a valuable resource to teachers in the planning of instruction.
- The NAEP Questions Tool is teacher friendly and may be accessed from any computer with an Internet connection.

Teachers across the nation are continually searching for high quality resources to improve instruction and student performance in their classrooms. If you have been searching for a resource that provides an extensive bank of items, scorers' commentaries, student examples, statistics related to student performance across the nation and in your state, easy access, and is free, then search no further. The NAEP Questions Tool is that resource.

To obtain more information regarding the NAEP Questions Tool, visit the NAEP web site at www.nces.ed.gov/nationsreportcard. If you are interested in additional information on the NAEP Questions Tool or on workshops, contact your NAEP state Coordinator. ■

Dr. Jeff Barker is the NAEP State Coordinator at the Georgia Department of Education. He has spent the last two years at the state department and 14 years in education in Georgia as a teacher and administrator, both at the elementary and middle school grade levels. He is also a part-time instructor at Georgia State University where he teaches middle grades education courses at the graduate level.



Sample Questions and Information Accessible Through the NAEP Questions Tool

Grade 8 Science

Hearing an Echo

Question

While practicing for a play, a student standing on the stage of a large, empty auditorium shouts loudly and hears her voice echo throughout the room. Later, the same student is on the stage of the same auditorium, which is now full of quiet people. The student shouts again, just as loudly. This time, however, she does not hear an echo. Explain why she hears an echo the first time and why she does not hear an echo the second time.

Scoring Guide

Score and Description

Complete

Student demonstrates understanding of the transmission, reflection, and absorption of sound. The response mentions that the sound is reflected or bounced off the walls and/or empty seats the first time the student shouts and that the audience absorbs the sound the second time.

Partial

Student response mentions only the reflection or bouncing of sound off the walls and/or empty seats the first time the student shouts.

OR

Student response mentions only the absorption of the sound by the audience the second time the student shouts.

Unsatisfactory/Incorrect

Student response demonstrates no understanding of the reflection of sound off the walls and seats of the auditorium the first time the student shouts, and no understanding of the absorption of the sound by the audience the second time.

Performance Data
2000 National Performance Results

Score	Percentage of Students
Complete	10%
Partial	33%
Unsatisfactory/Incorrect	53%
Omitted Item*	2%
Off Task**	1%

Note: These results are for public and nonpublic school students. Percentage may not add to 100 due to rounding.

Grade 8 Math

Find a Median

Question

4, 8, 3, 2, 5, 8, 12
What is the median of the numbers above?
A) 4 B) 5 C) 6 D) 7 E) 8

Content Classification

Data analysis, statistics, and probability

This question was classified in the data analysis, statistics, and probability content area. This content area focuses on the skills of collecting, organizing, reading, representing, and interpreting data. These topics are assessed in a variety of contexts to reflect the use of these skills in dealing with real-world information. Students are expected to use statistics and statistical concepts to analyze and communicate interpretations of data. Students are also expected to understand the meaning of basic probability concepts and applications of these concepts in problem-solving and decision-making situations. Questions emphasize appropriate methods of gathering data, the visual exploration of data, ways to represent data, and the development and evaluation of arguments based on data analysis.

Procedural knowledge

This question measures students' procedural knowledge. Students demonstrate procedural knowledge in mathematics when they select and apply appropriate procedures correctly; verify or justify the correctness of a procedure using concrete models or symbolic methods; or extend or modify procedures to deal with factors inherent in problem settings. Procedural knowledge encompasses the abilities to read and produce graphs and tables, execute geometric constructions, and perform noncomputational skills such as rounding and ordering. Procedural knowledge is often reflected in a student's ability to connect an algorithmic process with a given problem situation, to employ that algorithm correctly, and to communicate the results of the algorithm in the context of the problem setting.

Performance Data
2000 National Performance Results

Score	Percentage of Students
Correct	57%
Incorrect	42%
Omitted Item*	1%

Note: These results are for public and nonpublic school students. Percentage may not add to 100 due to rounding.

Grade 12 Science
Non-inherited disease

Question

Give an example of a disease that could probably not be treated by use of recombinant DNA technology, and explain why you think that this technology could not be used to treat this disease.

Scoring Guide
Score and Description
Complete

Student response identifies a correct example of a disease that most likely could not be treated using recombinant DNA technology and gives a correct justification such as the disease is not genetic.

Partial

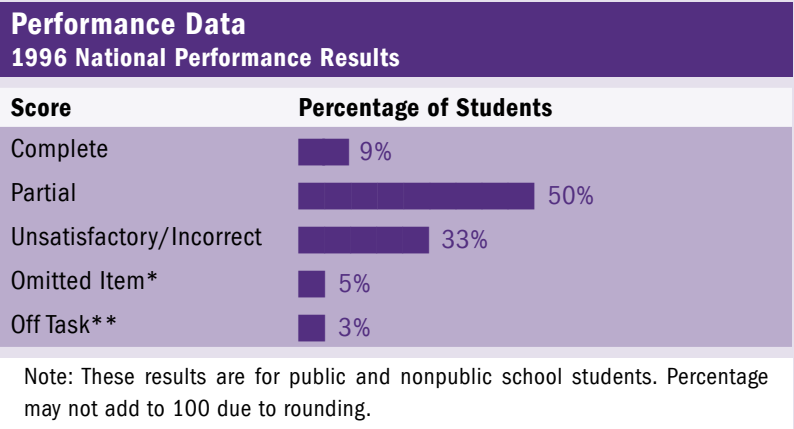
Student response

- a. identifies a correct example of a disease, or
- b. provides a correct justification but no disease is chosen, or
- c. provides an inappropriate disease but understand that a non-hereditary

condition most likely cannot be treated with recombinant DNA technology.

Unsatisfactory/Incorrect

Student response provides no information demonstrating an understanding that certain diseases are not genetic and most likely cannot be treated using recombinant DNA technology.



Grade 12 Math
Compare Mean and Median

Question

This question requires you to show your work and explain your reasoning. You may use drawings, words, and numbers in your explanation. Your answer should be clear enough so that another person could read it and understand your thinking. It is important that you show all of your work.

The table below shows the daily attendance at two movie theaters for 5 days and the mean (average) and the median attendance.

	Theatre A	Theatre B
Day 1	100	72
Day 2	87	97
Day 3	90	70
Day 4	10	71
Day 5	91	100
Mean (Average)	75.6	82
Median	90	72

Which statistic, the mean or the median, would you use to describe the typical daily attendance for the 5 days at Theater A? Justify your answer.

Content Classification
Data analysis, statistics, and probability

This question was classified in the data analysis, statistics, and probability content area. This content area focuses on the skills of collecting, organizing, reading, representing, and interpreting data. These topics are assessed in a variety of contexts to reflect the use of these skills in dealing with real-world information. Students are expected to use statistics and statistical concepts to analyze and communicate interpretations of data. Students are also expected to understand the meaning of basic probability concepts and applications of these concepts in problem-solving and decision-making situations. Questions emphasize appropriate methods of gathering data, the visual exploration of data, ways to represent data, and the development and evaluation of arguments based on data analysis. This question also focuses on the subtopic of describing measures of central tendency (i.e., mean, median, and range).

Problem solving

This question measures students’ problem solving ability. Students demonstrate problem solving in mathematics when they recognize and formulate problems; determine the consistency of data; use strategies, data, models; generate, extend, and modify procedures; use reasoning in new settings; and judge the reasonableness and correctness of solutions. Problem solving situations require students to connect all of their mathematical knowledge of concepts, procedures, reasoning, and communication skills to solve problems.

Scoring Guide
In this question, a student has to look at the data and determine which measure, the median or the mean, would best describe the typical daily attendance at each Theater. A student has to have an understanding of the meaning of mean and median in order to provide a correct answer and explanation. For full credit a student has to answer the median for part a and include an explanation that would include that day 4’s attendance is significantly different than the rest of the days and the mean for part b with an explanation that shows an understanding that the mean is a better indicator because all of the attendance numbers for

Theater B are clustered. Varying levels of partial credit (satisfactory, partial, and minimal) could be earned depending on how well the student reasons and communicates the correct answer.

Score and Description
Extended

Indicates the better measure for each theater and gives a complete explanation for each measure

Satisfactory

Indicates the better measure for each theater and gives a complete explanation for one measure

Partial

Indicates mean for Theater B and median for Theater A with either no explanation or an incomplete explanation

OR

selects the better measure for one theater and gives an appropriate explanation

Minimal

Indicates the mean for Theater B with no explanation or an incomplete explanation

OR

indicates the median for Theater A with no explanation or an incomplete explanation

Incorrect

Incorrect response

Solution

Selects and provides appropriate explanation for why the mean is a better measure for the typical attendance for Theater B and the median is the better measure for Theater A.

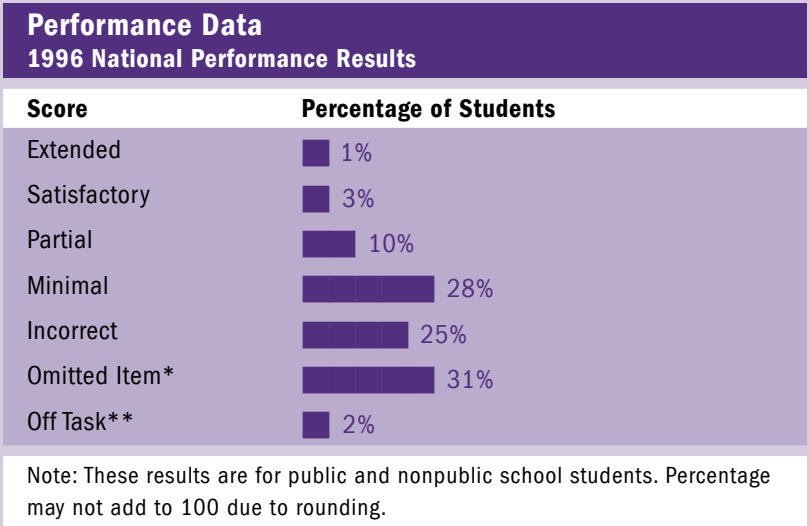
An explanation for Theater A should include the idea that the attendance on day 4 is much different than the attendance numbers for any other days for Theater A.

An appropriate explanation for Theater B should include the following ideas

- There are two clusters of data
- The median is representative of only one of the clusters while the mean is representative of both

OR

- a justification that conveys the idea that 82 is a better indicator of where the “center” of the 5 data points is located



*Omitted Item means no response was given. ** Off Task means response given was unrelated to the item.

Classroom Assessments Can Improve Learning

Classroom assessments can help teachers improve their instruction and help students learn. Thomas R. Guskey discusses the value of assessment in his February 2003 article, “How Classroom Assessments Improve Learning” in *Educational Leadership*. The assessments teachers administer on a regular basis are well suited to guide improvements in student learning. Teachers trust these results because they are immediate, are easy to analyze at the individual student level, and are directly related to classroom instructional goals, but they may not often realize the importance of their assessments as an integral part of the instruction process and as critical contributors for helping students learn. To use assessments to improve instruction and student learning, teachers need to alter their approach to assessments in three important ways. They must develop useful assessments, provide corrective instruction, and give students second chances to demonstrate success.

Many teachers still mistakenly believe that they must keep their assessments secret. They allow students to regard assessments as guessing games. Classroom assessments should not surprise students, but should instead reflect the teacher’s instructional activities, the concepts and skills emphasized in class, and the teacher’s clear criteria. Ideally, all assessments should be aligned with state or district standards for judging students’ performance. Students can then see these assessments as fair measures of important learning goals. Teachers continue to facilitate learning by providing students with important feedback on their learning progress and by helping them identify learning problems.

The best classroom assessments also serve as meaningful sources of information for teachers, helping them identify what they taught well and where they need to improve. Teachers gather this vital information by tallying how many students missed each assessment item or failed to meet a specific criterion and by paying special attention to the trouble spots, those items or criteria missed by large numbers of students in the class. The teacher must first analyze the quality of the item or criterion to determine if it is ambiguously worded, if the criterion is unclear, or if students misinterpreted the question. If teachers find no obvious problems with the item or criterion, yet fewer than half of the students in a class answer a clear question correctly or meet a particular criterion, they must then turn their attention to improving their teaching strategies.

Since assessments do not mark the end of learning, they must be followed by high-quality corrective instruction designed to remedy whatever learning errors the assessment identifies. Corrective instruction involves extending and strengthening teachers’ initial teaching approaches. These instructional alternatives should present concepts in new ways, engage students in different and more appropriate learning experiences, and accommodate differences in students’ learning styles and intelligences. Those students who excel should receive enrichment activities, such as those designed for gifted and talented students, to help broaden and expand their learning.



Developing ideas for corrective instruction and enrichment activities can be difficult, but structured professional development opportunities can help teachers share strategies and collaborate on teaching techniques. Faculty or department meetings devoted to developing alternative assessment strategies and collaborative partnerships with district-level personnel, local colleges, and universities offer highly effective resources for ideas and practical advice.

Assessments must be part of an ongoing effort to help students learn. To become an integral part of the instructional process, students must be given a second chance to demonstrate success. A mistake can be the beginning of learning if teachers follow assessments with helpful corrective instruction. Then, students have a second chance to demonstrate their new level of competence and understanding, giving them another opportunity to experience success in learning.

It is important to use classroom assessment as a vital component in our efforts to improve education and student learning. Instead of focusing on assessments simply as tools for accountability, teachers can alter the way they use assessment results, improve the quality of their classroom assessments, and align their assessments with valued learning goals and state or district standards. When teachers’ classroom assessments become an integral part of the instructional process to help students learn, the benefits of assessment for both students and teachers will be boundless. ■

Source: *Educational Leadership*, February 2003, Volume 60, Number 5

The percentage of 8th graders performing at or above the proficient level on the national writing assessment increased 4% between 1998 and 2002.

Facts About Assessment

- All assessment is a way of seeing, understanding, and evaluating. It is a most important step in a complex educational process.
- No single form of assessment works well in all situations and for all purposes.
- Assessment can lead to more effective classroom instruction and better student thinking and learning.
- Assessment gives us dependable data on whether or not our students are learning what they need to know.

Comparing NAEP to Your State Assessment

In addition to annual state assessments, sample schools from each state are selected to participate in NAEP studies.

It's important to understand how these assessments are similar, and how they differ, so that you can explain the importance of these tests to students and parents. NAEP and state tests differ in their purpose and scope, the populations tested, the design of the tests, and how the results are analyzed and reported.

Purpose and scope

State Education Departments and NAEP administer assessments to students for many of the same reasons. For example, they both aim to measure student knowledge of content and identify general areas of curricular strength and weakness. While state assessments are designed to measure the state's own curriculum standards, the NAEP assessments allow accurate comparison of one state's performance to achievement levels and performance in other states, comparison of national performance over time by geographic regions of the country, and comparison for specific subgroups of the student population. The results of both state tests and NAEP may be reviewed by federal, state, and local officials to improve instruction in a variety of ways.

Populations tested

State tests and NAEP assess the population differently. State assessments are typically given to all students at designated grade levels. In contrast, a representative sample of the country's student population is selected for participation in the NAEP assessment, and each participating student takes only a small portion of the overall assessment. Since the implementation of the No Child Left Behind Act, schools in districts with Title I funding are required to participate in the 4th and 8th grade NAEP assessments in reading and mathematics, if selected.

Test design

Most state assessments are directly aligned to state or local standards and curricula. This alignment is crucial for the results of the test to give an accurate picture of what is happening in schools as in terms of meeting the state's objectives. A test blueprint is developed from the standards; questions are then developed, pilot tested, and continually evaluated. The content for the NAEP assessment is developed in a similar way. Because there are no nationally mandated standards, the National Assessment Governing Board (NAGB) is responsible for developing a framework for each area assessed. (For more information about NAGB visit www.nagb.org.)

Each framework includes specific subject content as well as thinking skills, and is reviewed by educators, education officials, and content experts. NAGB then oversees the development, piloting, and evaluation of all items before the assessments are given.

There is much variation in the format of state assessments. While multiple-choice items have been most widely used, increasingly states are incorporating other formats in addition to multiple-choice. These other formats include short answer, constructed response, and essay. The NAEP assessment utilizes all four types of questions.

Analysis and reporting of results

State assessments report results for individual students, schools, and districts. In contrast, NAEP provides results only by state, for the nation as a whole, and for certain very large school districts. No individual or specific school results are reported. Because the same tests are used nationwide, NAEP results provide valid state-to-state, regional, and national comparisons. The results of state-administered assessments are not valid for state-to-state or national comparisons because the state-developed tests differ. ■

Attitude

continued from page 1

Students will get their cues about how to perceive these assessments from how they "read" your attitude toward the assessment. Does your positive attitude resonate? Do you exhibit a desire for your students to perform well on these assessments? Or are you anxious about them? Do you resent having to use class time for them?

Teachers, students,
and parents must work
together to create that
positive testing environment
where students will do their
best.

The attitude you communicate—both verbally and non-verbally, in what you say and what you do not say—is important in determining the atmosphere in which the assessments will take place. Be positive. Set a positive tone and high expectations.

Be aware of test anxiety. While low levels of anxiety may produce positive effects by keeping students focused and alert, anxiety can become excessive and interfere with student performance. Students may pick up test anxiety from other students or at home from their parents. Anxiety can be contagious.

In advance of the assessment, explain in a positive way its purpose and how the information from the assessments will be used. Take the time to discuss these as a class and answer any questions your students have about the purpose, the format, or about test-taking strategies.

NAEP now introduces

the MySchool Web site

The NAEP MySchool web site is designed to provide information to schools participating in the NAEP assessment. If your school has been selected to participate, a password to access the site will be provided.

FEATURES INCLUDE:

- Online registration
- Tools for communicating with the school's NAEP representative
- A personalized timeline of NAEP activities
- Online chats with NAEP staff
- Access to relevant NAEP publications and documents

With the MySchool Website, schools can:

- Obtain information about the current program
- Submit their list of students online
- Receive reminders about assessment activities
- Send feedback about their experience

www.mynaep.com

The MySchool Website is a restricted use website.

Advise your students to get a good night's sleep before the assessments, to have a healthy breakfast that morning, and to come in ready to do their best.

Students should be confident that they have the necessary preparation to do well. That preparation covers both familiarity with the content that is being assessed and an awareness of good standardized test-taking skills. Test-taking skills should be practiced across subjects as part of your regular classroom instruction. ■

Test-Taking Strategies that Work

An effective teacher and a strong instructional program provide students with the knowledge they need to do well on tests. However, a lack of test-taking skills can prevent students from showing what they really know. Students who have the academic knowledge sometime perform poorly simply because they are unfamiliar with a question type, are unfamiliar with test-taking strategies, or do not have an opportunity to practice sample test items.

First and foremost, we want students to do well on tests, be they classroom, standardized, or the NAEP assessment, because the test results provide information on what students have learned. States are testing students more frequently, and the results of these tests are being used to make important decisions. Taking tests seriously and doing all we can to help students do their best can maximize the benefits of tests.

Administering Tests: Tips for Teachers

The tips listed below will be helpful when students are taking a standardized test. Many of the tips may also be helpful when students take classroom tests.

Before the Test

- Explain the purpose and the importance of the test.
- Teach test-taking strategies.
- Give students sample test items to practice. Practice is an important part of a student's preparation for any standardized test.
- Understand the guidelines that will be used to evaluate constructed responses and communicate them to students.
- Review the sample items and answer choices with students. Explain each answer and how one would arrive at it. Urge students to discuss the reasons for the correct answer. Discussion of all the choices can help students adopt better strategies as they see why one answer was better than the others.

Testing Day

- Make sure students have all necessary materials.
- Read all directions and answer clarifying questions to make sure students understand the directions.
- Tell the students how much time they will have to complete the test.

After the Test

- Collect and account for all test materials.
- Immediately after the test, engage your students in discussions about the test and their feelings about the experience. Ask them what they learned, and how the test relates to their classroom activities.
- Analyze test reports for instructional strengths and weaknesses when possible.
- Develop a plan to modify instructional strategies to address any identified weaknesses. ■

Test-Taking Tips for Students



GENERAL

- Read the directions very carefully, looking for specific instructions on how to proceed. Watch for details. You may find that you need to refer to a table or graph to answer a question or that you only need to answer two out of the four essay questions given.
- Do not spend too much time on one question. If you have trouble answering a question, skip it and go on. If you have time later, you may be able to return to the questions you skipped and try to answer them.
- Stay calm and focus on doing your best. Do not rush through the test. If others finish while you are still working, do not worry. It does not matter who finishes first.
- Use all the time you are given. If you finish before the time is up, use the extra time to look over your answers.
- Pace yourself. Check the clock from time to time to make sure you are pacing yourself appropriately.
- Make sure you answered all questions.
- Check for careless mistakes, such as marking the wrong bubble.
- Review the problems you thought were the hardest.
- Be neat when writing answers or filling in answer bubbles. Stray marks may be counted as wrong answers.
- Draw a simple picture. This strategy may help you solve math word problems more easily.

MULTIPLE CHOICE QUESTIONS

- Read the questions first. This strategy is most helpful when you have to answer questions about a reading passage. Reading the questions first may save you time because you will know what to look for as you read the passage.
- Read the questions carefully. Watch out for negative words in the instructions or in the main question. You may have been told to select an option that is not true.
- Read all answer choices before choosing your answer. Do not stop reading the answer choices when you find a good answer. Another answer may be better.
- Try each answer choice. One way to find the right answer, even when you are not sure how to solve a math problem or complete a fill in the blank question, is to try each answer choice.
- Use the process of elimination. Rule out answers you know are wrong.

SHORT ANSWER QUESTIONS

- Explain your answer. Start by reading the problem and the directions carefully. Solve the problem and show your work. Write a short description of what you did to solve the problem and why. Check your answer.

ESSAY QUESTIONS

- Organize your thoughts before you begin to write. A short plan will improve your thinking.
- Include a thesis sentence in the introduction, develop the body of the essay by writing and organizing paragraphs that support the main idea, use transitions to connect your points, and write a conclusion.
- Check grammar and spelling. However, know that grammar and spelling will not affect your score on certain tests.
- Write clearly. Be sure to make your writing legible.
- If you run out of time, outline the remaining information.

What I Did When my School Gave the NAEP Assessment

When some of the students in my senior English class were selected to participate in NAEP, they were not eager to take the assessment. Some teachers had told them that they did not have to bother. It was of no use. My principal called me into her office to discuss this problem. I asked her if I could have a 15-minute assembly with the students in the grade to be assessed.

I developed a sort of pep-rally mentality with the seniors—something they all understood. I gave them the history and background on NAEP so they could feel a part of a nationwide movement. I explained why they should do their best for self, school, community, state, and country. Most of

all, I stressed the benefits they would receive from participating in the assessment. They would begin to see what they knew in terms of the rest of the country; they would see how prepared they were; they would hone their test-taking skills. In essence, they would learn a good deal. This approach worked and the students took the exam.

In My Classroom

On the day of the assessment, I bought my entire class pizza and as we ate, we talked and encouraged those who were about to represent us all in the test-taking activity. As they left, the remaining part of my class cheered and wished the takers well.

When we met again the next day, we had a debriefing of what the students did on the assessment, how prepared they were, etc. What a success!

A Year Later

When the state and national NAEP results were released the following year, I met with my department members to share the NAEP data. (I do this with all assessment results.) We analyzed them, related them to our own program, discussed possible changes or additions to our program, and most importantly, began a discussion that would continue for many months.

Dr. Marilyn Whirry